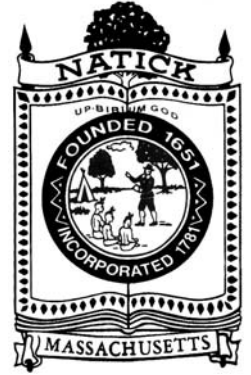




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ENGINEERING DIVISION
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Rules and Specifications Regulating Street Openings

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ADOPTED

March 9, 1998

AMENDED

April 9, 2007
February 9, 2009

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Rules and Specifications Regulating Street Openings Town of Natick, Massachusetts

In accordance with the regulations of the Board of Selectman entitled "Street Excavations" adopted March 9, 1998 and amended April 9, 2007 and February 9, 2009, by the Board of Selectmen, upon due notice the Board may from time to time amend and/or revise rules, regulations and specifications for excavations or digging within the limits of the public ways of the Town of Natick and may rule, regulate or specify particulars with respect to any excavation or diggings as aforesaid.

1.0 DEFINITIONS

- a. Permittee, Applicant or Contractor shall mean any person, firm partnership, association, society, corporation, company or organization of any kind that is licensed to undertake street openings (excavations) in the Town of Natick.
- b. Subcontractor shall mean any person, firm, partnership, association, society, corporation, company or organization of any kind, planning to undertake a street excavation and who is not the actual Street Opening Permit holder.
- c. Engineer shall mean Town Engineer of the Town of Natick. He may from time to time delegate certain of these duties to designees who will act in the town's behalf.
- d. Street shall mean:
 - a. Any Town accepted Street (Public Way).
 - b. Any Way defined by the Town Clerk as "A Way Used and Maintained as a Public Way" (MGL: Chapter 41, Section 81L)
- e. Period of Responsibility – Each applicant is responsible for the satisfactory maintenance of the trench and/or work area for one year from the **date of acceptance of final required trench restoration**. If the contractor involved does not notify the Engineering Department regarding start of work and inspections as is required elsewhere in these Rules, he may be held responsible for the trench for a period exceeding one year.

Work covered under a permit issued herein is not considered "approved" for bond release purposes until such time as the one year "Period of Responsibility" has expired.
- f. Duration of Permit - Permits may be issued by the Town Engineer in a given year during the calendar period April 15th to November 1st. All excavation work must be completed by November 15th of that same year. The permit is good for excavation **ONLY** during the calendar period in which it was issued. If the rights granted in a particular permit are not exercised by November 15, the permit shall be null and void. No permit will be allowed to extend to the next calendar season.

- G. Street Opening Moratorium – Shall mean the period of time during which non-emergency openings of a street that have been resurfaced within the last 5 (five) years are not allowed.
- H. Emergency – Shall mean a condition in which the safety of the public is endangered or where corrective action is required to maintain or restore essential public utility service.
- I. Trench Permit - Shall mean that Permit required by the Massachusetts Department of Public Safety pursuant to MGL c.82A and CMR 7.00 (as amended).

2.0 STREET OPENING PERMIT

No person shall make any excavation in a street as defined in Section 1.0d above without first obtaining a Street Opening Permit and if necessary a Trench Permit from the Engineering Department, for each specific excavation, except as otherwise may be provided in these regulations.

Permits may be obtained from the Engineering Department, on a routine basis, between April 15th and November 1st, with all excavation work to be completed by November 15th. For work to be performed outside this time frame, permission must be obtained from the Director of Public Works and the Town Engineer for each specific excavation before the Engineering Department can issue the Permit. Permits must be obtained at a minimum 72 hours prior to the time when the street opening is to occur. As noted later in Section 6.0 of these regulations, once a permit is received, the Engineering Department shall also be notified at least 24 hours prior to the street opening is to take place.

No person shall make any excavation in any other Way defined in Section 1.0d above without first obtaining a Permit from the Engineering Department for each specific excavation, except as otherwise may be provided in these regulations. In addition to obtaining this Permit from the Engineering Department, the applicant is responsible for obtaining any and all permission from the private entities involved that own the rights in the way. Evidence of this permission will be required before a Permit will be issued. This evidence will be attached to and become part of the Permit, if it is approved.

Private Ways that are not maintained by the Town of Natick are not covered by these Rules and Regulations. All permission to excavate and occupy the Way must be obtained from the private parties involved.

The permit will be for each specific excavation only. No generic permits will be issued. Work must be performed within the time frame specified and agreed to by the applicant at the time of application. All time requirements specified and required elsewhere in these Rules and Regulations must be met.

Permits must be kept at the job site during the work and must be shown, upon request, to any authorized Town personnel.

The permit applicant shall comply with the Federal Occupational Safety and Health Act., and any and all regulations promulgated by the Massachusetts Department of Public Safety pursuant to MGL c.82A and 520 CMR 7.00 (as amended).

If a State Street Opening Permit is required due to the location of the proposed work, it must be obtained by the applicant prior to the filing of the application for the Town permit. Upon application for the Town Permit, the State Street Opening Permit will be attached to and become part of the Town permit if it is so approved.

3.0 APPLICATION FEE

At the time of application, all fees associated with the permit must be paid by the applicant. The fee schedule shall be as follows:

Up to 30 linear feet of roadway affected	\$200.00
Each additional 50 linear feet of roadway affected	\$50.00

This charge is in addition to any charges assessed by any other Department, Board or Agency as well as in addition to any charges that may be incurred from a Water and Sewer Permit or a Trench Permit that is also assessed by the Engineering Department.

4.0 PERFORMANCE GUARANTEE

A satisfactory bond of a surety company authorized to do business in the Commonwealth of Massachusetts or a cash bond, in the minimum sum of five thousand dollars (\$5,000.00), conditioned substantially that the applicant shall guarantee the faithful and satisfactory performance of the work in all respects, and shall replace or restore that portion of any street, highway, way or road in which said applicant, his employees or agents shall make such excavation.

The Town Engineer in his sole discretion may require a bond in an amount greater than that stated above, if in his consideration the scope of the work requires a larger amount. Additionally, the Town Engineer, may accept one \$5,000.00 bond for multiple excavations if the total value of work does not exceed \$5,000.00

No Street Opening Permit shall be issued until a proper Bond has been submitted and accepted.

The Town will not accept cancellation notices on bonds submitted by an applicant for a permit for which the One Year Period of Responsibility has not expired. Coverage must remain in full force for the entire One Year Period. It is the responsibility of the applicant to ensure coverage is maintained. The Town requires a Street Opening be covered by the Bond for one full year from date of completion of work

5.0 INSURANCE

The Contractor shall not commence work until all insurance and bonds required have been obtained and until copies of policies and certificates thereof are submitted to the Engineering Department.

Such insurance shall protect the Town of Natick, its agents, elected and appointed officials, commission members and employees against liability, loss or expense on the account of damaged property (including loss of use), injury to or death of any person or persons and for care and loss of services arising in any way out of or in connection with or resulting from the work or service performed on behalf of the Town of Natick. The Town of Natick shall be listed as Certificate Holder.

COMPENSATION AND EMPLOYER'S INSURANCE:

*(REQUIRED ONLY IF THE CONTRACTOR IS DOING WORK FOR THE TOWN)

The Contractor agrees to comply with Workers' Compensation Laws of the State and to maintain a Workers' Compensation and Employer's Liability Policy. This policy shall be endorsed to provide All States Coverage and Voluntary Compensation Coverage. The policy will also include coverage for United States Longshoreman's and Harbor workers' coverage. No Street Opening Permit shall be issued until a proper Certificate of Insurance has been submitted for the applicant and their subcontractors.

Worker's Compensation And Employer's Liability Statutory Limits	Each Accident	\$500,000
	Disease – Policy Limit	\$500,000
	Disease – Each Employee	\$500,000

COMMERCIAL GENERAL LIABILITY INSURANCE:

The Contractor shall provide Commercial General Liability Insurance, Blanket Broad Form Contractual Liability, explosion, collapse or structural injury to property of others including underground utility facilities, contractor's protective liability, if subcontracting is authorized, and products and completed operations for a minimum of one year after acceptance of the work. Any renewal certificates shall be filed with the Engineering Department.

Bodily Injury and Property Damage	General Aggregate	\$2,000,000
	Products – Comp/Op Agg.	\$2,000,000
	Each Occurrence	\$2,000,000
	Personal Injury	\$1,000,000
	Fire Damage	\$100,000
	Medical Payments	\$10,000

OWNER'S PROTECTIVE LIABILITY INSURANCE:

The Contractor shall provide Owner's Protective Liability Insurance in the name of the Town of Natick, including Officers and employees of the Town of Natick, insuring against bodily injury

and property damage liability for which they may become legally obligated to pay as damages sustained by any persons, caused by accident and arising out of operations performed for the named insured by independent contractors and general supervision thereof.

Bodily Injury and Property Damage: \$ 2,000,000 (Minimum)

BUSINESS AUTOMOBILE POLICY:

The contractor shall provide Automobile Liability insurance which shall include coverage for all leased, owned, non-owned and hired vehicles

Combined Single Limit for Bodily Injury and Property Damage: \$1,000,000

COVERAGE FOR HAZARDS:

Policies submitted to the Town must include coverage for explosion, collapse or underground hazards. XCU Exclusions must be "waived" or "included" and this must be so stated on the Certificate of Insurance

INSURANCE SUMMARY:

The Contractor may, at his option, provide the limit of liability as set out above by a combination of the above described policy forms, including an Umbrella or Excess liability Policy. The Excess or Umbrella must provide coverage on at least a following form basis.

It is a condition of this policy that the insurance policies waive any and all government immunity as a defense in any action brought against the insured or any other party.

The Contractor shall provide insurance to cover operating hazards during the period of placing the facility in operation and during testing, and until such times as the facilities are completed and accepted for operation by the Town and written notice of that fact has been issued by the Town.

Approval of the insurance by the Town shall not in any way relieve or decrease the liability of the Contractor hereunder. It is expressly understood that the Town does not in any way represent that the specified limits of liability or coverage or policy forms are sufficient or adequate to protect the interest or liabilities of the Contractor.

The Town shall be given at least 30 days written notice of cancellation, non-renewal, or material change of the required insurance coverage

All responsibility for payment of any sums resulting from any deductible provisions, or self-insured retention conditions of the policy or policies shall remain with the Contractor

The insuring company or agent shall deliver to the Engineering Department, certificates of all insurance required signed by an authorized representative of the insurance company and stating

that all provisions of the specified insurance requirements are satisfied. The certificates shall be submitted directly to the Engineering Department for review and approval.

The Contractor shall not begin any work until the Town has reviewed and approved the insurance certificates and so notified the Contractor directly in writing. Any notice to proceed that is issued shall be subject to such approval by the Town.

ADDITIONAL INSURED:

The Town must be named as an additional insured and this must be so shown on the Certificate of Insurance. Refer to Attachment 3 for sample form.

GENERAL INDEMNITY:

The Contractor shall indemnify, defend and save harmless the Town of Natick, its appointed or elected officials, commission members, employees, agents and each of them for any and all suits, actions, legal or administrative proceeding, claims, demands, damages, liabilities, interest, attorneys fees, costs and expenses of whatsoever kind or nature, whether arising before or after final acceptance and in any manner directly or indirectly caused, occasioned or contributed to in whole or in part by reason of any act error or omission, fault or negligence whether active or passive by the Contractor, or any one acting under its direction, control of on its behalf in connection with or incident to its performance of the Contract.

Property Damage Liability shall include damage to property caused by explosives and blasting, or by vehicles or equipment, or on account of trenches or from any other cause. The Town Engineer may, in his sole discretion, require increased limits of insurance for property damage.

Utility companies that are self-insured must present a certificate or document proving their financial responsibility in at least the minimum limits as are herein described.

The applicant, their subcontractors and agents shall carry, at a minimum, the above insurance limits.

No Street Opening Permit shall be issued until a proper Certificate of Insurance has been submitted for the applicant, their subcontractors and agents.

If a Contractor carries an excess liability policy (an "umbrella" policy), the Engineering Department reserves the right to verify that the policy meets at least the minimum insurance requirements of these Rules and Regulations.

It is the responsibility of the applicant to ensure that his insurance coverage remain in full force for the entire One Year Period of Responsibility. If the policy submitted by an applicant expires before the expiration of the One Year Period, he must present the Engineering Department with a new Certificate of Insurance covering the remainder of the One Year Period.

The instrument must be so written so as to allow the Town of Natick to perform work deemed necessary by the Town Engineer to correct any deficiencies and all costs incurred by the Town may be applied against the Performance Bond if they are not recovered after billing to the Permittee. Public Utility Companies, State and Federal Agencies are exempt from this section. The Town will give the Permittee eight (8) hours notice to make the necessary repairs.

Insurance Certificates shall be provided in the name of the permit applicant only.

Any subsequent agreements between said applicant and a subcontractor engaged by him shall be considered a private matter, as the Town considers all issues having to do with obtaining the permit and performance of the work the responsibility of the permit holder.

The Town Engineer may at any time cancel or suspend permits (licenses) for cause. Cancellation of insurance endorsement automatically cancels the permit.

Any Subcontractor (refer to Section 1) planning to undertake a Street Opening must, before such excavation commences, present the Engineering Department with insurance certificates and bonds in amounts identical to those specified elsewhere in these Regulations. Failure to do this may result in immediate shutdown of the work

It shall be the sole responsibility of the Permit Holder to submit the proper bonds and insurance. Failure to do so may result in denial of future permits.

6.0 START OF WORK AND INSPECTIONS

Work shall start as near to the starting date, as specified in the permit, as possible. A twenty-four (24) hour notice to the Town Engineer or his designee prior to start of work is required, except in critical areas. In critical areas, a forty-eight (48) hour notice to the Town Engineer or his designee prior to start of work is required. Critical areas are considered to be street intersections, arterial routes and streets within the downtown shopping and business areas. Streets considered as arterial routes are:

West Central Street, East Central Street, Speen Street, Hartford Street, South Main Street, North Main Street, Eliot Street, Pond Street; Union Street, Pleasant Street, Marion Street, Bacon Street, Oak Street, Washington Ave., Mill Street, Cottage Street, and Walnut Street.

All trenches, excavations, and utility installations for which a Street Opening Permit is required and for which one is granted, must be inspected by the Town Engineer or his designee before any part of the work is backfilled. It is the responsibility of the applicant to properly notify the Engineering Department and request the inspection. If the trench is not properly inspected, the Engineering Department reserves the right to require the applicant to re-excavate all or a portion of the work.

In addition to the requirements of the previous paragraph, the Contractor must also call the Engineering Department by 7:30 A.M. on the day the work is to begin in order to schedule inspections by Engineering Department personnel. Not properly notifying the Engineering

Department as is herein described may result in the Contractor being held responsible for the trench for a period longer than one year. Such a failure may also result in further permits being delayed or denied.

7.0 EMERGENCY ACTION

Nothing in these rules shall be construed to prevent the making of such excavations as may be necessary for the preservation of life or property or for the location of trouble in conduit, cable, or pipe, or other buried structure or appurtenance. The entity making such excavation shall apply to the Engineering Department for such a permit on the first working day after such emergency work is commenced.

The person engaged in emergency action shall notify the Engineering Department, Police Department, Dig Safe, and the Public Utility companies at the start of the emergency work.

8.0 TRAFFIC SAFETY

The Permittee shall take appropriate measures to ensure that during the performance of the excavation so far as is practicable, normal traffic conditions be maintained at all times, causing as little inconvenience as possible to the occupants of abutting property and to the general public

The Permittee, where possible, shall maintain safe crossings for two lanes of vehicular traffic at all public intersections, as well as safe crossings for pedestrians at intervals of not more than three hundred feet. If any excavation is made across a public way, it shall be made in sections to ensure safe crossing for both vehicles and pedestrians. If the way is not wide enough to hold the excavated material for part-time storage and still allow safe passage of traffic, the material shall be immediately removed from the location.

The Traffic Safety Officer may permit the closing of streets and walks to all traffic for a period of time prescribed by him if, in his opinion, it becomes necessary. If a street is so closed, it is the applicant's responsibility to notify the ***Police, Fire*** and ***School*** Departments.

Warning signs shall be placed at sufficient distance from the construction operation to alert all traffic coming from both directions. Cones or other approved devices shall be placed to channel traffic, all in accordance with any requirements of the Traffic Safety Officer.

Warning signs, lights, and other precautions as may be necessary for the purpose, unless specified by the Town Engineer or Traffic Safety Officer shall conform to the latest requirements and practice of the Massachusetts Department of Public Works. All costs incurred, including those for traffic warning signs, barriers, flagman, policeman, etc. shall be fully borne by the Permittee.

All Street Openings may require the presence of a Police Officer or a certified Road Flagger to be on duty for traffic safety. If, in the determination of the Police Chief (or his designee), a Police detail officer or certified Road Flagger will not be necessary then the Permittee will be required to return to the Engineering Office a copy of the Street Opening Permit with the appropriate Police Department signatures stating a detail will not be required.

9.0 ACCESS TO VITAL STRUCTURES

The excavation work shall be performed and conducted so as not to interfere with access to fire hydrants, fire stations, fire escapes, water gates, underground vaults, catch basins, or any other vital public necessity as designated by the Town Engineer or his designee.

10.0 RELOCATION AND PROTECTION OF UTILITIES

The Permittee shall not interfere with any existing utility without the written consent of the Town Engineer and the owner of the utility. If it becomes necessary to relocate an existing utility, this shall be done by its owner and the cost of such work borne by the permittee. The permittee shall inform itself as to the existence and location of all underground utilities and protect the same against damage. The permittee shall adequately support and protect (by timbers, sheeting, etc) all pipes, conduits, poles, wires, cables or other appurtenance *which* may be in any way affected by the excavation work, and do everything necessary to support, sustain and protect them under, over, along or across such work area. In the event any of said pipes, conduits, poles, wires, cable or appurtenance be damaged (and for this purpose pipe coatings or outer encasements or similar type protective devices are to be considered as part of a sub-structure), such damage shall be repaired by the agency or persons owning them and the expense of such repairs borne by the permittee. The permittee shall be responsible for any damage done to any public or private property by reason of the breaking of any water pipes, sewer gas pipe, electric conduit or other such similar type appurtenance.

11.0 NOTIFICATION TO PUBLIC UTILITY COMPANIES

The permittee shall in accordance with the General Laws of the Commonwealth of Massachusetts, currently in effect, give notice to public utility companies before making excavation in a public way.

12.0 DIG SAFE

A valid "Dig Safe" number shall be obtained for each application. No application will be accepted without it. It will be the applicant's responsibility to comply with all Dig Safe rules, regulations and guidelines.

13.0 PROTECTION OF ADJOINING PROPERTY

The permittee shall at all times and at his own expense preserve and protect from injury any adjoining property by providing proper foundations, and by taking such other precautions as may be necessary for the purpose. The permittee shall, at his own expense, shore up and protect buildings, trees, walls, fences or other property likely to damage during the process of the excavation work and shall be responsible for all damage to public or private property or highways resulting from its failure to properly protect and carry out said work. The permittee shall not remove, even temporarily, any trees or shrubs which exist in planting step areas without first obtaining the consent of the Town Engineer or his designee. The following policy will be

adhered to in the case a tree is destroyed by the permittee or a tree is authorized for removal by the Town Engineer or his designee:

- All tree stumps and debris resulting from the work **shall** be removed from the location.
- A replacement shall be made by the permittee for each tree removed or destroyed with a minimum caliper of 2-1/2 inches or greater; the species and place of relocation to be designated by the Tree Warden planted in place and it must be balled and burlapped.
- The permittee shall deliver to the Town Engineer a bonafide order, placed with a recognized established nursery before installing the authorized trees. The order shall include in it a statement that the size and species required will be in accordance with "USA Standard for Nursery Stock" and that planting will be done in accordance with the applicable provisions of "Massachusetts Department of Public Works Standard Specifications".
- **All protective work carried out or deemed necessary affecting buildings must be approved by the Building Inspector.**
- For roadside planting the following type trees will be acceptable subject to approval by the Tree Warden as to which specific species is best for the location where the tree is planted: Norway Maple, Sugar Maple, Crimson King Maple, European linden or approved Equal.
- In certain areas of the Town, ornamental trees, such as Flowering Crab, European Mountain Ash, Japanese Flowering Cherry, Moraine Ash and Washington Hawthorne are acceptable as replacement trees. These trees are purchased by height and not by caliper and must be balled and burlapped.
- They must conform to the following minimum heights: 5'-6' Flowering Crabs and Flowering Cherries, and 6'-8', Moraine Ash, European Mountain Ash and Washington Hawthorne. In areas under utility wires, the tree replacement policy will be governed by both the Town Tree Warden and the Electric Company's standards at the time of the work being completed.

14.0 PROTECTIVE MEASURES

It shall be the duty of every person cutting or making any excavation in a street to place and maintain such barriers and devices necessary for the "Public Safety" as may be required by the Town Engineer immediately following said excavation

Barriers shall meet the requirements of the Town Engineer or Traffic Safety Officer. Warning lights shall be flares, torches, lanterns, electric markers or flashers and used to indicate the hazard to traffic from sunset of each day to sunrise the next day. Lanterns shall have clear, red or ruby globes. Electric markers or flashers shall emit light at sufficient intensity and frequency to be visible at a reasonable distance for safety. Reflectors or reflecting material may be used to supplement, but not replace, light sources. The type of warning lights to be used in any particular

location is subject to the approval of the Town Engineer or Traffic Safety Officer. Flares or lanterns should be used on all single or small excavation within pavement lines.

15.0 EXCAVATED MATERIAL

All material excavated shall be removed from the site, except in such cases as the material is deemed suitable for backfill by the Town Engineer or his designee. Any material excavated and deemed unsuitable for backfill shall be both removed and replaced with suitable material at the permittee's expense. It is the sole responsibility of the applicant to remove and dispose of all excess material at a legally approved site.

16.0 CONSTRUCTION MATERIALS AND EQUIPMENT

Construction materials and equipment on the site shall be limited in quantity and space occupying area so as to not unduly hinder and block the way.

17.0 DUST AND CLEAN-UP

As the excavation work progresses, all ways shall be thoroughly cleaned of all rubbish, excess earth, rock and other debris. The permittee shall take necessary precautions to prevent and avoid dust and to keep the ways clean each day. All cleaning operations shall be accomplished at the expense of the permittee and shall be carried out to the satisfaction of the Town Engineer or his designee.

18.0 PROTECTION OF GUTTERS AND BASINS

The permittee shall maintain all gutters free and unobstructed for the full depth of the adjacent curb and for at least 3' in width from the face of such curb at the gutter line. Catch basins shall be kept clear and serviceable.

The appropriate environmental protection methods should be employed to ensure that run-off from construction does not cause problems with the town storm drainage system. The appropriate combination of hay bales and erosion control barriers shall be incorporated onto the site. A catch basin filter bag shall be installed in catch basins downstream of the construction site (as directed by the Town Engineer or his designee) to prevent harmful silt and debris from entering the storm water inlet.

The permittee shall make provisions to take care of all surface water, mud, silt, residue or other run-off pumped or removed from excavations and shall be responsible for any damages resulting from his failure to so provide.

19.0 HOURS OF OPERATION

Each permittee shall conduct and carry out excavation work in such a manner as to avoid unnecessary, inconveniences and annoyance to the general public and occupants of neighboring property. Work covered under the Street Opening Permit shall be restricted to 7:00am to 4:00pm,

Monday through Friday unless prior approval is given by the Town Engineer or in cases of an emergency as defined in Section 1.0H.

20.0 TRENCHES

The maximum length of open trench permissible at any time shall be in accordance with existing normal municipal standards or as may be specified by the Town Engineer or his designee. No greater length shall be open for pavement removal, excavation, construction, backfilling, patching and other operations without the written permission of the Town Engineer.

The permit applicant shall comply with the Federal Occupational Safety and Health Act., and any and all regulations promulgated by the Massachusetts Department of Public Safety pursuant to MGL c.82A and 520 CMR 7.00 (as amended).

No trench shall be left open over night unless specifically authorized by the Town Engineer or his designee. Proper protection (i.e. plates) must be employed on construction sites to ensure the appropriate protection during non-working hours.

21.0 PROMPT COMPLETION OF WORK

After an excavation is commenced, the permittee shall prosecute with diligence and expedition, all excavation work covered by the excavation permit and shall promptly complete such work and restore the way to its original condition or as near as may be, so as not to obstruct the way or travel thereon more than is reasonably necessary.

22.0 BREAKING THROUGH PAVEMENT

The use of hydro-hammers or heavy duty pavement breakers for breaking pavement are limited on all streets unless written permission is granted by the Town Engineer for their use after due consideration of the location, the condition of the street and the depth of saw cutting required ahead of the use of the hammers.

Approved cutting of bituminous pavement surface ahead of excavation is required to confine pavement damage to the limits of the trench. Sections of bituminous or cement concrete sidewalks shall be removed to the nearest score-line or approved saw cut edge.

Unstable pavement shall be removed over cave-outs and over breaks and the sub-grade shall be treated as the main trench.

Pavement edges shall be trimmed to a vertical face and neatly aligned with the center line of the trench. Cut-outs outside of the trench lines must be normal or aligned parallel to the center line of the trench

Generally excavations shall be made in open cut. Tunneling will be allowed by special permission of the Town Engineer.

Before the permittee starts any excavations, he must confer with the Gas, Telephone and Electric companies, Highway Division, Water and Sewer Division and the Engineering Division to obtain all information from each as to the depth of trench, location of all utilities, and other conditions as to where and how the excavation shall be made. All safeguards such as lanterns, barriers, and signs shall be maintained at all times by the permittee (licensed installer) while the work is in progress.

Street surface openings will not be allowed during the Street Opening Moratorium Period (as defined in Section 1.0G) except in cases of extreme emergency (as defined in Section 1.0H) or in cases where during the 5th year of the moratorium a homeowner desires to connect to a natural gas line for home heating purposes. In cases where street openings are allowed during the Street Opening Moratorium Period the permit applicant will be required to backfill the trench with Excavatable Controlled Density Fill as specified in Section 23.0 below.

23.0 BACKFILLING

The trench in the street must be filled the same day it is opened unless the applicant is otherwise directed by the Town Engineer or his designee. The trench shall be backfilled to existing line and grade to accommodate the thickness of asphalt required. Refer to the Typical Street Replacement detail (Attachment 2).

The permittee shall maintain the surface of the trench and shall promptly replace or fill with similar material any depression, dip, pothole or other defect that appears during the period of responsibility.

Trenches shall be backfilled in 12" lifts from the bottom of the excavation. Each lift shall be thoroughly compacted by means of a vibratory or mechanical compactor before the next lift is laid in place. Bituminous concrete, cement concrete, sticks, logs, metal, loam, organic materials, etc. shall not be used as backfill. When, in the opinion of the Town Engineer, the excavated material is not available as backfill, it shall be removed from the site and the trench shall be backfilled with approved bank run gravel.

The Town Engineer or his designee may require the use of Excavatable Controlled Density Fill (Flowable Fill) during backfilling. Within the limits of the pavement, the trench shall be backfilled with Flowable Fill to an elevation of four (4) inches below the top of the paved surface. The adjacent material extending one (1) foot beyond each side of the trench shall be removed, to a depth of four (4) inches. The perimeter of the trench shall be saw cut to provide a clean vertical joint. The vertical faces of the adjoining pavement shall then be coated with a Rapid Setting Type 1 (RS-1) emulsion. The pavement shall be installed as specified in Section 25.0 (Restoration of Permanent Paving).

Puddling of the trench backfill material will not be allowed, unless prior authorization is obtained from the Engineering Department.

24.0 TEMPORARY PAVEMENT RESURFACING

If temporary resurfacing is to be placed due to location of work, time of year, or other applicable reason, the temporary pavement shall be plant mixed hot asphalt as produced in accordance with the Standard Specifications of the Massachusetts Highway Department and is to be a minimum of three inches thick.

As soon as is consistent with the final permanency of the work, or as required by the Town Engineer, the temporary pavement shall be excavated to the required grade in order to place the permanent bituminous concrete pavement.

25.0 RESTORATION OF PERMANENT PAVING

All permanent paving shall be done in accordance with the specifications of the Engineering Department of the Town of Natick by and at the expense of the permittee.

The permittee shall remove and acceptably dispose of **all** excavated material before proceeding with the remainder of the work and shall thoroughly compact the surface of the sub-base. Any broken or irregular edges of existing pavements shall be cut away in straight lines as directed leaving a sound vertical face at least twelve inches back from the edge of the existing pavement.

The bituminous concrete base and top shall be laid and rolled in two courses. The binder (base course) shall be a minimum two and one half inches in depth and the top course shall be a minimum one and one half inches in depth. The base course of the permanent pavement shall be placed and carefully raked to a minimum surface and thoroughly rolled to the required thickness. Before placing the base course of the permanent pavement, the edge of the original bituminous surfacing shall receive an application of approved asphalt emulsion so that the new pavement material may be properly bonded to the old. The top course of the permanent paving shall be placed to a grade that will match the existing bituminous surface after rolling.

The permanent paving shall not overlap the existing pavement and will not have to be applied with a mechanical spreader unless otherwise directed.

The Permittee shall furnish, place, grade, and compact Bituminous Concrete Pavement of Class 1, Type I-1 as shown and specified in the latest Massachusetts Highway Department Standard Specifications for Highways and Bridges.

Under certain circumstances where trenches are considered extensive it may be required, upon completion of patching trenches, to overlay the affected area for the full width of roadway and at least 30 ft. beyond the affected area with one and one half inch of dense graded bituminous concrete.

Curb to curb overlays 15 feet either side of the trench will be required for pavements which are less than five years old and for other pavements which are void of cracks, potholes, patches, and are in good condition, in the opinion of the Town Engineer. The Town Engineer shall, in all cases, have the sole discretion as to the restoration of the pavement.

If, upon excavation of the trench, it is discovered that existing pavements thickness is greater than the replacement thickness herein specified, the Town Engineer reserves the right to require the applicant to match the existing thickness when the trench is re-paved.

The Town Engineer may, at his discretion, require a roadway surface be given infrared treatment, if he determines it is warranted by the age or condition of the roadway surface.

All sidewalks dug through shall be carefully patched after backfilling a bituminous concrete sidewalk shall be squared off and patched with the same material and rolled so as to provide a continuous smooth surface. Cement concrete sidewalks shall be repaired by making a new concrete block or blocks through which the trench passes. Pre-formed expansion joints, when deemed necessary, will be installed against buildings, walls, steps, foundations or existing concrete blocks. The new cement concrete square shall be made of Air Entrained Class "A" (4000 psi.) mix or better and be matched in color with the remaining sidewalk as nearly as possible. All concrete must be cured by covering with material in accordance with the best known concrete curing procedures. All walks shall be laid over a minimum of 12 inches of well compacted gravel cement concrete and shall be treated with silicone or linseed oil sealer for salt damage prevention. The permittee shall be responsible for repairing any damage done to public utilities (water, sewer, gas, electric, telephone, etc.) or to Town trees, shrubs, poles or signs which may be disturbed or damaged while doing the work or account thereof. The permittee shall be responsible for the maintenance of the street opening excavation trench for one year after the date of completing the installation except where such maintenance is made necessary by the act or neglect of another.

26.0 CEMENT CONCRETE PATCH PAVING

All restoration of cement patch paving areas shall be done at the expense of the permittee and must meet the specification of the Town Engineer.

In instances when an open cut is permitted, provisions for patching will require wherever practical, that a six inch reinforced or precast concrete slab be laid over the backfilled trench extending one foot beyond either side of the edge of surface and allowing for a three inch Bituminous Concrete Type I-1 surface all as shown on the detail sheet Attachment 2 entitled "Typical Street Replacement Detail."

When approved, the concrete slab may be cast-in-place conforming to Massachusetts Standard Specifications for Class "F" Cement concrete and additionally, shall be High-Early Strength. The slab shall have steel reinforcing for tensile strength placed in accordance with good engineering practices. The permittee must place temporary heavy duty steel plating adequate to carry heavy traffic over the trench area until the concrete is sufficiently cured

Consideration may under certain limited conditions be given to the elimination of the concrete patch, allowing underground utility installations to be made where the permittee agrees to replace foundation and base material in kind, and to satisfactorily maintain a temporary (plant mixed hot-asphalt) bituminous concrete Type I-1 patch for a period of one year at which time a permanent patch with approved material shall be installed. In this case, a specific bond may be

required to insure the continued maintenance of the temporary patch and the construction of the permanent patch at the end of the one year period.

27.0 RESTORATION OF PAVEMENT MARKING

All permanent paving markings (crosswalks, traffic center lines, etc.) that are obliterated or damaged during construction shall be repainted by or under the direction of the Town Engineer of the Town of Natick at the expense of the permittee.

28.0 RESTORATION OF GRASS PLOTS/LOAM STRIPS

Upon completion of excavation, all grassed areas and loam strips within the Town way that have been disturbed, shall be restored with sod or loam and grass seed. The One Year Period of Responsibility also applies to these surfaces.

ATTACHMENTS

The following attachments are incorporated and made part of these Rules and Specifications:

- Attachment #1: Copy of Street Opening Permit
- Attachment #2: Typical Street Replacement Detail
- Attachment #3 Typical Insurance Certificate
- Attachment #4: Trench Permit

Attachment #1: Copy of Street Opening Permit

TOWN OF NATICK

DEPARTMENT OF PUBLIC WORKS

ENGINEERING DIVISION

508-647-6551



Street Opening Permit

Permit Number	<input type="text"/>	Date	<input type="text"/>
Location (Street)	<input type="text"/>	Dig Safe Number	<input type="text"/>
House Number(s)	<input type="text"/>	Contractor	<input type="text"/>
Telephone #	<input type="text"/>	Emergency #	<input type="text"/>
		Available 24 hours	<input type="text"/>
Police Signature *	<input type="text"/>		
	Print Name	Signature	

* A Police Detail or Certified Road Flagger is required unless the applicant has obtained the signature above noting that one is not required for this location. If this area is not signed by the Police Chief or his designee, it will be the responsibility of the Applicant to obtain a Police Detail or Certified Road Flagger.

Grant of location issued by Board Of Selectman ☐ Yes ☐ N/A

Is the street currently under the 5-year no-dig moratorium? ☐ Yes ☐ No

Trench Permit Required ☐ Yes ☐ No If Yes, Trench Permit #:

Approved By Signature: Permit is not valid until signed

Comments

The applicant accepts compliance with the rules and regulations governing street excavations. A twenty-four (24) hour notice to the Engineering Department before the start of said excavation is required. The Insurance Bond obtained by the Town for this permit shall be in effect for a minimum of 1 year from the date of excavation.

This Permit expires NOVEMBER 15th of the year issued.

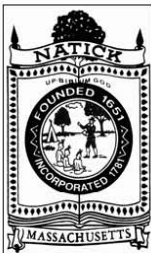
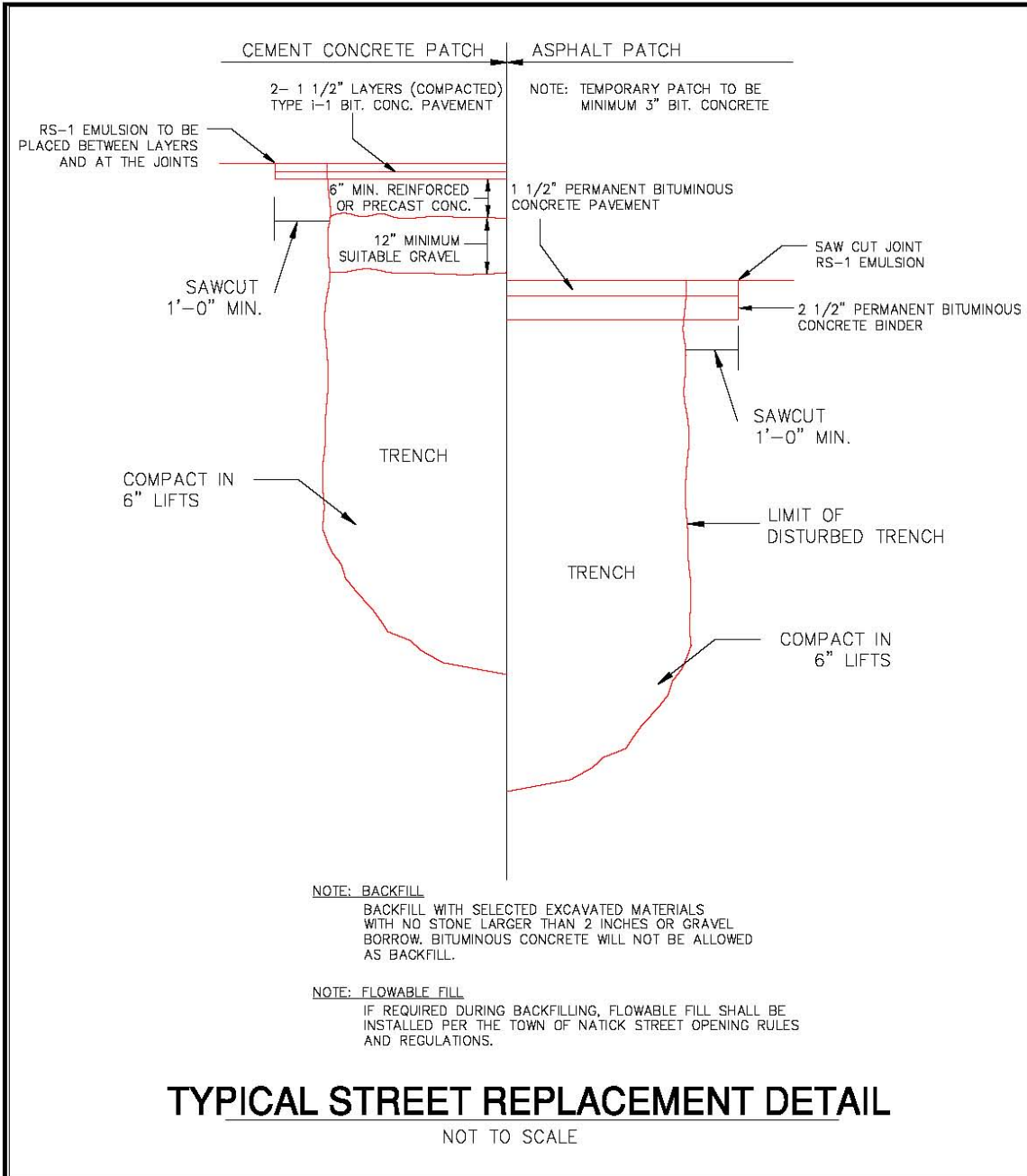
All Permit Applications must be received by NOVEMBER 1st of the year issued.

Tuesday, February 10, 2009

Page 1 of 1

NOTE: THIS IS NOT AN OFFICIAL COPY OF THE STREET OPENING PERMIT APPLICATION. IT CAN NOT BE USED TO APPLY FOR A STREET OPENING PERMIT. ALL PERMIT APPLICATIONS MUST BE FILLED OUT AT THE DEPARTMENT OF PUBLIC WORKS IN THE ENGINEERING DIVISION.

Attachment #2: Typical Street Replacement Detail



TOWN OF NATICK, MASSACHUSETTS

DEPARTMENT OF PUBLIC WORKS – ENGINEERING DIVISION

75 WEST STREET NATICK, MA 01760

Attachment #2

Detail Name:
STREET REPLACEMENT DETAIL

Date Last Updated:
MARCH 26, 2007

Attachment #3: Typical Insurance Certificate

ACORD™ CERTIFICATE OF LIABILITY INSURANCE					DATE (MM/DD/YYYY)	
PRODUCER			THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.			
			INSURERS AFFORDING COVERAGE		NAIC #	
INSURED			INSURER A:			
			INSURER B:			
			INSURER C:			
			INSURER D:			
			INSURER E:			
COVERAGES						
THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. AGGREGATE LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.						
INSR ADD'L LTR INSR	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMITS	
	GENERAL LIABILITY <input type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS MADE <input type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER <input type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC				EACH OCCURRENCE \$ DAMAGE TO RENTED PREMISES (Ea occurrence) \$ MED EXP (Any one person) \$ PERSONAL & ADV INJURY \$ GENERAL AGGREGATE \$ PRODUCTS - COMP/OP AGG \$	
	AUTOMOBILE LIABILITY <input type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS <input type="checkbox"/> NON-OWNED AUTOS				COMBINED SINGLE LIMIT (Ea accident) \$ BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$	
	GARAGE LIABILITY <input type="checkbox"/> ANY AUTO				AUTO ONLY - EA ACCIDENT \$ OTHER THAN EA ACC \$ AUTO ONLY: AGG \$	
	EXCESS/UMBRELLA LIABILITY <input type="checkbox"/> OCCUR <input type="checkbox"/> CLAIMS MADE DEDUCTIBLE RETENTION \$				EACH OCCURRENCE \$ AGGREGATE \$ \$ \$ \$	
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? If yes, describe under SPECIAL PROVISIONS below OTHER				WC STATU- TORY LIMITS <input type="checkbox"/> OTH- ER <input type="checkbox"/> E.L. EACH ACCIDENT \$ E.L. DISEASE - EA EMPLOYEE \$ DISEASE - POLICY LIMIT \$	
DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES / EXCLUSIONS ADDED BY ENDORSEMENT / SPECIAL PROVISIONS						
CERTIFICATE HOLDER			CANCELLATION			
Town of Natick 13 Central Avenue Natick, MA 01760 Certificate Holder is additional insured			SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING INSURER WILL ENDEAVOR TO MAIL _____ DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO DO SO SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE INSURER, ITS AGENTS OR REPRESENTATIVES. AUTHORIZED REPRESENTATIVE			

Attachment #4: Trench Permit

Town of Natick
Department of Public Works
75 West Street
Natick, MA 01760
Phone (508) 647-6550
FAX (508) 647-6560

Permit Number _____
Date Issued _____
Expiration Date _____

TRENCH PERMIT
Pursuant to G.L. c. 82A §1 and 520 CMR 7.00 et seq.(as amended)

THIS PERMIT MUST BE FULLY COMPLETED PRIOR TO CONSIDERATION

Name of Applicant			Phone		Cell
Street Address					
City/Town	MA	ZIP			
Name of Excavator (if different from applicant)			Phone		Cell
Street Address					
City/Town	MA	ZIP			
Name of Owner(s) of Property			Phone		Cell
Street Address					
City/Town	MA	ZIP			
Other Contact		Permit Fee Received No () Yes ()			
Description, location and purpose of proposed trench: Please describe the exact location of the proposed trench and its purpose (include a description of what is (or is intended) to be laid in proposed trench (eg; pipes/cable lines etc..) Please use reverse side if additional space is needed.					
Insurance Certificate #:					
Name and Contact Information of Insurer:					
Policy Expiration Date:					

Attachment #4: Trench Permit (Cont'd)

Dig Safe #:	
Name of Competent Person (as defined by 520 CMR 7.02):	
Massachusetts Hoisting License #	
License Grade:	Expiration Date:

BY SIGNING THIS FORM, THE APPLICANT, OWNER, AND EXCAVATOR ALL ACKNOWLEDGE AND CERTIFY THAT THEY ARE FAMILIAR WITH, OR, BEFORE COMMENCEMENT OF THE WORK, WILL BECOME FAMILIAR WITH, ALL LAWS AND REGULATIONS APPLICABLE TO WORK PROPOSED, INCLUDING OSHA REGULATIONS, G.L. c. 82A, 520 CMR 7.00 et seq., AND ANY APPLICABLE MUNICIPAL ORDINANCES, BY-LAWS AND REGULATIONS AND THEY COVENANT AND AGREE THAT ALL WORK DONE UNDER THE PERMIT ISSUED FOR SUCH WORK WILL COMPLY THEREWITH IN ALL RESPECTS AND WITH THE CONDITIONS SET FORTH BELOW.

THE UNDERSIGNED OWNER AUTHORIZES THE APPLICANT TO APPLY FOR THE PERMIT AND THE EXCAVATOR TO UNDERTAKE SUCH WORK ON THE PROPERTY OF THE OWNER, AND ALSO, FOR THE DURATION OF CONSTRUCTION, AUTHORIZES PERSONS DULY APPOINTED BY THE MUNICIPALITY TO ENTER UPON THE PROPERTY TO MONITOR AND INSPECT THE WORK FOR CONFORMITY WITH THE CONDITIONS ATTACHED HERETO AND THE LAWS AND REGULATIONS GOVERNING SUCH WORK.

THE UNDERSIGNED APPLICANT, OWNER AND EXCAVATOR AGREE JOINTLY AND SEVERALLY TO REIMBURSE THE MUNICIPALITY FOR ANY AND ALL COSTS AND EXPENSES INCURRED BY THE MUNICIPALITY IN CONNECTION WITH THIS PERMIT AND THE WORK CONDUCTED THEREUNDER, INCLUDING BUT NOT LIMITED TO ENFORCING THE REQUIREMENTS OF STATE LAW AND CONDITIONS OF THIS PERMIT, INSPECTIONS MADE TO ASSURE COMPLIANCE THEREWITH, AND MEASURES TAKEN BY THE MUNICIPALITY TO PROTECT THE PUBLIC WHERE THE APPLICANT OWNER OR EXCAVATOR HAS FAILED TO COMPLY THEREWITH INCLUDING POLICE DETAILS AND OTHER REMEDIAL MEASURES DEEMED NECESSARY BY THE MUNICIPALITY.

THE UNDERSIGNED APPLICANT, OWNER AND EXCAVATOR AGREE JOINTLY AND SEVERALLY TO DEFEND, INDEMNIFY, AND HOLD HARMLESS THE MUNICIPALITY AND ALL OF ITS AGENTS AND EMPLOYEES FROM ANY AND ALL LIABILITY, CAUSES OR ACTION, COSTS, AND EXPENSES RESULTING FROM OR ARISING OUT OF ANY INJURY, DEATH, LOSS, OR DAMAGE TO ANY PERSON OR PROPERTY DURING THE WORK CONDUCTED UNDER THIS PERMIT.

APPLICANT SIGNATURE

_____ **DATE** _____

EXCAVATOR SIGNATURE (IF DIFFERENT)

_____ **DATE** _____

OWNER'S SIGNATURE (IF DIFFERENT)

_____ **DATE:** _____

For City/Town use -- Do not write in this section	
PERMIT APPROVED BY PERMITTING AUTHORITY Date CONDITIONS OF APPROVAL 	\$_____ Application Fee

Attachment #4: Trench Permit (Cont'd)

CONDITIONS AND REQUIREMENTS PURSUANT TO G.L.C.82A AND 520 CMR 7.00 et seq. (as amended)

By signing the application, the applicant understands and agrees to comply with the following:

- i. No trench may be excavated unless the requirements of sections 40 through 40D of chapter 82, and any accompanying regulations, have been met and this permit is invalid unless and until said requirements have been complied with by the excavator applying for the permit including, but not limited to, the establishment of a valid excavation number with the underground plant damage prevention system as said system is defined in section 76D of chapter 164 (DIG SAFE);
- ii. Trenches may pose a significant health and safety hazard. Pursuant to Section 1 of Chapter 82 of the General Laws, an excavator shall not leave any open trench unattended without first making every reasonable effort to eliminate any recognized safety hazard that may exist as a result of leaving said open trench unattended. Excavators should consult regulations promulgated by the Department of Public Safety in order to familiarize themselves with the recognized safety hazards associated with excavations and open trenches and the procedures required or recommended by said department in order to make every reasonable effort to eliminate said safety hazards which may include covering, barricading or otherwise protecting open trenches from accidental entry.
- iii. Persons engaging in any in any trenching operation shall familiarize themselves with the federal safety standards promulgated by the Occupational Safety and Health Administration on excavations: 29 CFR 1926.650 et.seq., entitled Subpart P "Excavations".
- iv. Excavators engaging in any trenching operation who utilize hoisting or other mechanical equipment subject to chapter 146 shall only employ individuals licensed to operate said equipment by the Department of Public Safety pursuant to said chapter and this permit must be presented to said licensed operator before any excavation is commenced;
- v. By applying for, accepting and signing this permit, the applicant hereby attests to the following: (1) that they have read and understands the regulations promulgated by the Department of Public Safety with regard to construction related excavations and trench safety; (2) that he has read and understands the federal safety standards promulgated by the Occupational Safety and Health Administration on excavations: 29 CMR 1926.650 et.seq., entitled Subpart P "Excavations" as well as any other excavation requirements established by this municipality; and (3) that he is aware of and has, with regard to the proposed trench excavation on private property or proposed excavation of a city or town public way that forms the basis of the permit application, complied with the requirements of sections 40-40D of chapter 82A.
- vi. This permit shall be posted in plain view on the site of the trench.

For additional information please visit the Department of Public Safety's website at www.mass.gov/dps

Attachment #4: Trench Permit (Cont'd)

Summary of Excavation and Trench Safety Regulation (520 CMR 14.00 et seq.)

This summary was prepared by the Massachusetts Department of Public Safety pursuant to G.L.c.82A and does not include all requirements of the 520 CMR 14.00. To view the full regulation and G.L.c.82A, go to www.mass.gov/dps. Pursuant to M.G.L. c. 82, § 1, the Department of Public Safety, jointly with the Division of Occupational Safety, drafted regulations relative to trench safety. The regulation is codified in section 14.00 of title 520 of the Code of Massachusetts Regulations. The regulation requires all excavators to obtain a permit prior to the excavation of a trench made for a construction-related purpose on public or private land or rights-of-way. All municipalities must establish a local permitting authority for the purpose of issuing permits for trenches within their municipality. Trenches on land owned or controlled by a public (state) agency requires a permit to be issued by that public agency unless otherwise designated.

In addition to the permitting requirements mandated by statute, the trench safety regulations require that all excavators, whether public or private, take specific precautions to protect the general public and prevent unauthorized access to unattended trenches. Accordingly, unattended trenches must be covered, barricaded or backfilled. Covers must be road plates at least ¾" thick or equivalent; barricades must be fences at least 6' high with no openings greater than 4" between vertical supports; backfilling must be sufficient to eliminate the trench. Alternatively, excavators may choose to attend trenches at all times, for instance by hiring a police detail, security guard or other attendant who will be present during times when the trench will be unattended by the excavator.

The regulations further provide that local permitting authorities, the Department of Public Safety, or the Division of Occupational Safety may order an immediate shutdown of a trench in the event of a death or serious injury; the failure to obtain a permit; or the failure to implement or effectively use adequate protections for the general public. The trench shall remain shutdown until re-inspected and authorized to re-open provided, however, that excavators shall have the right to appeal an immediate shutdown. Permitting authorities are further authorized to suspend or revoke a permit following a hearing. Excavators may also be subject to administrative fines issued by the Department of Public Safety for identified violations.

Attachment #4: Trench Permit (Cont'd)

Summary of 1926 CFR Subpart P -OSHA Excavation Standard

This is a worker protection standard, and is designed to protect employees who are working inside a trench. This summary was prepared by the Massachusetts Division of Occupational Safety and not OSHA for informational purposes only and does not constitute an official interpretation by OSHA of their regulations, and may not include all aspects of the standard.

For further information or a full copy of the standard go to www.osha.gov.

- **Trench Definition per the OSHA standard:**
 - An excavation made below the surface of the ground, narrow in relation to its length.
 - In general, the depth is greater than the width, but the width of the trench is not greater than fifteen feet.
- **Protective Systems** to prevent soil wall collapse are always required in trenches deeper than 5', and are also required in trenches less than 5' deep when the competent person determines that a hazard exists. Protection options include:
 - Shoring. Shoring must be used in accordance with the OSHA Excavation standard appendices, the equipment manufacturer's tabulated data, or designed by a registered professional engineer.
 - Shielding (Trench Boxes). Trench boxes must be used in accordance with the equipment manufacturer's tabulated data, or a registered professional engineer.
 - Sloping or Benching. In Type C soils (what is most typically encountered) the excavation must extend horizontally 1 ½ feet for every foot of trench depth on both sides, 1 foot for Type B soils, and ¾ foot for Type A soils.
 - A registered professional engineer must design protective systems for all excavations greater than 20' in depth.
- **Ladders** must be used in trenches deeper than 4'.
 - Ladders must be inside the trench with workers at all times, and located within 25' of unobstructed lateral travel for every worker in the trench.
 - Ladders must extend 3' above the top of the trench so workers can safely get onto and off of the ladder.
- **Inspections** of every trench worksite are required:
 - Prior to the start of each shift, and again when there is a change in conditions such as a rainstorm.
 - Inspections must be conducted by the competent person (see below).
- **Competent Person(s) is:**
 - Capable (i.e., trained and knowledgeable) in identifying existing and predictable hazards in the trench, and other working conditions which may pose a hazard to workers, and
 - Authorized by management to take necessary corrective action to eliminate the hazards. Employees must be removed from hazardous areas until the hazard has been corrected.
- **Underground Utilities** must be:
 - Identified prior to opening the excavation (e.g., contact Dig safe).
 - Located by safe and acceptable means while excavating.
 - Protected, supported, or removed once exposed.
- **Spoils** must be kept back a minimum of 2' from the edge of the trench.
- **Surface Encumbrances** creating a hazard must be removed or supported to safeguard employees. Keep heavy equipment and heavy material as far back from the edge of the trench as possible.
- **Stability of Adjacent Structures:**
 - Where the stability of adjacent structures is endangered by creation of the trench, they must be underpinned, braced, or otherwise supported.
 - Sidewalks, pavements, etc. shall not be undermined unless a support system or other method of protection is provided.
- **Protection from water accumulation hazards:**
 - It is not allowable for employees to work in trenches with accumulated water. If water control such as pumping is used to prevent water accumulation, this must be monitored by the competent person.
 - If the trench interrupts natural drainage of surface water, ditches, dikes or other means must be used to prevent this water from entering the excavation.
- **Additional Requirements:**
 - For mobile equipment operated near the edge of the trench, a warning system such as barricades or stop logs must be used.
 - Employees are not permitted to work underneath loads. Operators may not remain in vehicles being loaded unless vehicles are equipped with adequate protection as per 1926.601(b)(6).
 - Employees must wear high-visibility clothing in traffic work zones.
 - Air monitoring must be conducted in trenches deeper than 4' if the potential for a hazardous atmosphere exists. If a hazardous atmosphere is found to exist (e.g., O₂ <19.5% or >23.5%, 20% LEL, specific chemical hazard), adequate protections shall be taken such as ventilation of the space.
 - Walkways are required where employees must cross over the trench. Walkways with guardrails must be provided for crossing over trenches > 6' deep.
 - Employees must be protected from loose rock or soil through protections such as scaling or protective barricades

EFFECTIVE DATE: February 9, 2009

BY: Martha White
Martha White
Town Administrator

[Signature]

[Signature]
Kurtne Van Amstel

[Signature]

BOARD OF SELECTMEN